



Practitioner's Docket No.: 791_065 CONPATENT

ON APPEAL

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE
HONORABLE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the application of: Hiroshi Nemoto and Kenshin Kitoh

Ser. No.: 09/997,604

Group Art Unit: 1745

Filed: November 29, 2001

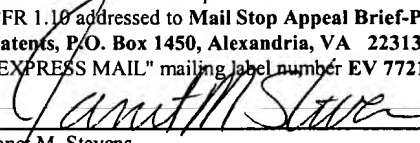
Examiner: Cynthia K. Lee

Confirmation No.: 5235

For: LITHIUM SECONDARY BATTERY

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Janet M. Stevens

TRANSMITTAL OF REPLY BRIEF

Sir:

Transmitted herewith are three copies of a Reply Brief for the above-referenced application.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1446.

Respectfully submitted,

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April 7, 2006
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Janet M. Stevens

REPLY BRIEF

Sir:

The following remarks are in response to arguments presented in the Examiner's Answer dated March 6, 2006.

Grounds of Rejection to be Reviewed on Appeal

Under the heading "(5) Summary of Claimed Subject Matter" on page 2 of the Examiner's Answer, there is a statement that the rejection of claims 12 and 19 under 35 U.S.C. §112, first paragraph has been withdrawn. Under the heading "(6) Grounds of Rejection to be Reviewed on Appeal" (also on page 2 of the Examiner's Answer) there is a statement that Appellant's statement of the grounds of rejection to be reviewed on appeal is correct. The Appellant's statement of the grounds of rejection to be reviewed on appeal as set forth in the Appeal Brief filed on January 13, 2006 includes the rejection of claims 12 and 19 under 35 U.S.C. §112, first paragraph. It is the Appellant's understanding based on the above, and on the text of the Examiner's Answer, that the rejection of claims 12 and 19 under 35

U.S.C. §112, first paragraph has been withdrawn, such that the remaining rejections in this appeal are those set forth in items "2." – "7." bridging pages 3 and 4 of the Appeal Brief.

Issue 2 – Rejection Under 35 U.S.C. §112, First Paragraph – Scope of Enablement

The rejection under 35 U.S.C. §112, first paragraph is based on an allegation by the U.S. PTO that the scope of enablement of the present specification is not commensurate with the scope of the rejected claims.

The U.S. PTO asserts that undue experimentation would be required to determine all of the compounds and conditions, other than what is specifically exemplified, which could be used to obtain the claimed morphology.

The U.S. PTO would require that persons of skill in the art be able to predict all combinations of materials and conditions which would result in a product exhibiting the claimed morphology, and to predict whether any particular combination of materials and conditions would result in a product exhibiting the claimed morphology, merely by reviewing the specification.

The U.S. PTO refers to MPEP §2164.08, which relates to the scope of enablement. The U.S. PTO completely overlooks the fact that whether or not subject matter which is encompassed by the claims but is not specifically exemplified is enabled by the disclosure is determined by the principles set forth in MPEP §2164, in its entirety. Instead, the U.S. PTO simply notes that a large amount of subject matter encompassed by the claims is not specifically exemplified in the specification and that there is a level of unpredictability with respect to obtaining the claimed morphology.

Under MPEP §2164.04:

A specification disclosure which contains a teaching of the manner and process of making and using an invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented must be taken as being in compliance with the enablement requirement of 35 U.S.C. 112, first paragraph, unless there is a reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support. As stated by the court, "it is incumbent upon the Patent Office, whenever a rejection on this basis is made, to explain *why* it doubts the truth or accuracy of any statement in a supporting disclosure and to back up assertions of its own with acceptable evidence or reasoning which is inconsistent with the contested statement. Otherwise, there would be no need for the applicant to go to the trouble and expense of supporting his presumptively accurate disclosure." 439 F.2d at 224, 169 USPQ at 370. (MPEP, section 2164.04).

The U.S. PTO completely ignores the burden placed upon it for justifying a rejection under the enablement requirement. The fact that the U.S. PTO is ignoring its burden is very clearly demonstrated in the paragraph bridging pages 21 and 22 of the Examiner's Answer, where the U.S. PTO states ". . .the objective truth of the statements that the invention would be useful is irrelevant and has nothing to do with the scope of enablement . . ." (Examiner's Answer, page 21, lines 17-19). This statement by the U.S. PTO is in direct contrast to MPEP, section 2164.04, quoted above.

The present specification, in particular, page 11, lines 5-17 and page 12, lines 3-12, provides guidance to enable a skilled artisan, with routine experimentation, to arrive at combinations of materials and conditions which will result in subject matter falling within the scope of the present claims. For instance, the present specification teaches, if a particular combination of materials and conditions, such as those employed in Comparative Example 1, does not result in a product which exhibits the features (e.g., morphology) recited in the present claims, the skilled artisan can modify the raw materials employed, or alter the conditions in the manner described in the present specification. For example, the present specification teaches that where too much particle growth is observed, as was the case in Comparative Example 2, whereby the particles became roundish, primary particles having the claimed morphology (substantially octahedral shape) can be obtained by lowering the synthesis temperature and/or shortening the synthesis time to suppress the particle growth (specification, page 12, lines 3-12). The U.S. PTO completely discounts all of this disclosure, and offers no justification for discounting the disclosure in the present specification. In addition, the U.S. PTO does not provide any explanation as to why it doubts the truth or accuracy of the statements in the present specification that persons of skill in the art would be able to practice the entire scope of the claimed invention.

The U.S. PTO's insistence on "predictability" approaches a position where *no experimentation* is permitted, rather than a requirement that practicing the invention would not require *undue* experimentation.

In summary, the U.S. PTO is reminded that under MPEP §2164.08:

[T]o provide effective incentives, claims must adequately protect inventors. To demand that the first to disclose shall limit his claims to what he has found will work or to materials which meet the guidelines specified for "preferred" materials in a process such as the one herein involved would not serve the constitutional purpose of promoting progress in the useful arts. (MPEP, section 2164.08).

Issue 3 – The U.S. PTO is Improperly Ignoring Relevant Disclosure in JP 08-217452 (JP '452)

Claims 13 and 17 on appeal (i.e., the two independent claims on appeal) each recite that primary particles of the positive electrode active materials have a "substantially octahedral shape." As noted by the U.S. PTO in page 24 of the Examiner's Answer, second line from last, the expression "substantially octahedral shape" is defined in the present specification. In particular, the original specification, page 8, lines 7-20, notes that the expression "substantially octahedral shape" includes not just primary particles having octahedral shape, but also primary particles of other shapes, namely, (a) particles wherein the apex formed by intersection of four crystal faces is not complete and is in the form of a plane or an edge, (b) particles in which a different crystal face is formed at an edge formed by intersection of two crystal faces, and (c) particles in which one crystal face is jointly owned by two primary particles or in which a primary particle grows from the surface of another primary particle, as well as shapes formed by partial chipping of the above shapes or joint possession of crystal faces between two primary particles.

The Examiner's Answer, paragraph bridging pages 24 and 25 states:

Although the definition of 'substantially octahedral shape' is found in the specification, they were not claimed explicitly. A reading of the specification provides no evidence to indication [sic] that these limitations must be imported into the claims to give meaning to disputed terms.

It is unclear what the U.S. PTO is stating in the above-quoted passage. Clearly, the claims employ the term "substantially octahedral", and that expression is explicitly defined in the present specification.

As noted in the Appeal Brief, page 13, first full paragraph, JP '452 is directed to a *needle-like* (or *acicular*) particle shape, and the U.S. PTO is attempting to ignore the fact that JP '452 itself discloses that the particle shapes disclosed therein are *needle-like* regular octahedral shaped particles and not regular octahedral shaped particles. Needle-like regular octahedral shaped particles each consist of a pair of regular semi-octahedral-shaped end regions with an extension portion extending therebetween, the extending portion being of generally square cross-section. The extension portion is what makes those particles needle-

like, i.e., having a major dimension which is substantially larger than the other two dimensions. Such needle-like regular octahedron shapes as disclosed in JP '452 do not fall within any of the definitions of "substantially octahedral shaped" as defined in the present specification and as set forth above herein.

The Examiner's Answer, paragraph bridging pages 25 and 26, states that "[t]he applicant has not provided any hard evidence, such as experimental evidence, that the crystals in the JP '452 reference are not substantially similar, if not identical to those of applicant's invention." It is respectfully noted that the disclosure in JP '452 itself discloses that those particles are needle-like, which is a shape which is not encompassed by the expression "substantially octahedral" employed in the present claims.

Issue 3 – There Is No Requirement That an Applicant Specify That a Claimed Feature Is "The Inventive Feature" in Order for the Feature to be Considered in the Patentability Determination

The Examiner's Answer, page 26, lines 7-11, states:

Applicant's assertion that the welding of plurality of current collecting portions directly to the electrodes contributes to the reduction of internal resistance according to the present invention is not supported by the original disclosure. The original disclosure does not state that welding the plurality of current collecting portions is the inventive feature to reduce resistance in the battery.

It is respectfully noted that claims 13 and 17 each recite welding a plurality of current collecting portions directly to the positive electrode (claim 13 additionally recites welding a plurality of current collecting portions directly to the negative electrode), as disclosed in the original specification. It has been noted that benefits (namely, reduced resistance) flow directly from doing so. It is respectfully noted that there is no requirement that a specification disclose a favorable effect provided by claimed subject matter in order to emphasize the importance of that claimed feature, and that there is no requirement that the specification indicate that such feature is "the inventive feature."

Issues 4 - 7 – The Allegations of Inherency Have Been Rebutted

In the Examiner's Answer, page 27, lines 3-8, there is a statement that ". . . the applicant has not disproven the Examiner's inherency arguments of the Zhong et al. ('104) reference. There is an analogous statement regarding Manev '949 in the Examiner's Answer, page 29, lines 6 - 8.

While the specification provides general conditions within which it is necessary to practice in order to obtain subject matter according to the claimed invention, the claims also recite a specific morphology (namely, substantially octahedral shape) which also must be satisfied in order fall within the scope of the claims (and, as noted above, the specification provides guidance regarding how to obtain such morphology while practicing within the general conditions described in the specification). The specification also describes Comparative Examples which show that practicing within these general conditions *does not* necessarily result in products which exhibit the claimed morphology. JP '452 itself indicates that the particles obtained therein do not exhibit the claimed morphology. Zhong '104 and Manev '949 contain no disclosure which would lead one of skill in the art (or require one of skill in the art) to make selections so as to obtain the claimed morphology.

In addition, the U.S. PTO asserts that the "compound" disclosed in the Abstract of Zhong '104 is "much closer" to the present invention than the Comparative Examples (Examiner's Answer, page 28, lines 8-10). It is respectfully noted that the Abstract of Zhong '104 does not disclose a particular compound, but rather a general formula encompassing a huge number of compounds. In any event, the comparative example employed materials and processing conditions within the general scope asserted by the Examiner to inherently result in the claimed morphology, and it was shown that the claimed morphology *did not* result.

Issues 4 - 7 – The U.S. PTO Mischaracterizes the Applicant's Arguments with Respect to Motivation

In the Examiner's Answer, page 28, lines 13-14, there is a statement that "Applicant argues that there is not motivation to combine Zhong '104 with Zhong '597 and Watanabe '975." There is an analogous statement regarding the combination of Manev '949 with Zhong '597 and Watanabe '975 in the Examiner's Answer, page 30, lines 8 - 9.

This is not what the applicants are arguing. Rather, the applicants are pointing out that neither the disclosure in Zhong '597 relied on by the U.S. PTO nor the disclosure in

Watanabe '975 relied on by the U.S. PTO would motivate one of skill in the art to modify the methods or materials employed in Zhong '104 so as to arrive at a method in which the primary particles of the positive electrode active material have morphology as recited in the present claims, because none of the applied references disclose or suggest primary particles of the positive electrode active material which have morphology as recited in the present claims. In addition, none of the applied references contain disclosure which would indicate that welding current collecting portions directly to the positive electrode of Zhong '104 would achieve any advantage.

* * * * *

In view of the above, in the Brief on Appeal filed on January 13, 2006, the Honorable Board of Patent Appeals and Interferences is respectfully requested to reverse the final rejection of claims 11-14, 16-21, 23 and 24, and to pass this application to allowance and issuance.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1446.

Respectfully submitted,



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April 7, 2006
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